

## **GUTS – A New SLR System for Japan**

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### **ABSTRACT**

Honeywell Technology Solutions Inc (HTSI) is currently integrating the Global High Accuracy Trajectory System SLR system for NASDA in the STALAS facility at the Goddard Geophysical and Astronomical Observatory. This system will ultimately be installed at the NASDA facility on Tanegashima Island in Japan. HTSI is manufacturing the SLR control system, electronics, optics, and aircraft warning radar system; producing and implementing the control, scheduling, and data processing software; integrating the NEC-manufactured laser and the Brashear-manufactured 1-meter telescope with our items; and preparing for collocation with the HTSI-operated NASA MOBLAS-7.

The GUTS SLR system will have the capability to range to satellites in orbits ranging from low Earth to geosynchronous. In addition, special modifications to the HTSI control software will allow the system to be operated remotely from the NASDA facility in Tsukuba via a low bandwidth data link as well as by a local operator at Tanegashima.

Initial integration testing of the system has produced outstanding results. Ranging to the calibration cube located on the system's optical table produces ranges with an RMS of ~2 mm. This is expected to be degraded to no worse than 2.5 mm when ranging is performed to the external calibration pier following the installation of the telescope.

HTSI would like to acknowledge the cooperation and support that we have received from NASDA (especially from Mr. Takashi Uchimura) and NEC (from the team led by Mr. Kaoru Asaba) in the implementation of this system.